



APPARATUS AND METHOD FOR MANUFACTURING RECLOSABLE
BAGS
UTILIZING ZIPPER TAPE MATERIAL

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This application is based on, and claims priority from, U.S. Provisional Patent Application Serial No. 60/10250,885,039,527, filed November 7, 2000-2001.

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Field of Invention

FIELD OF INVENTION

The present invention relates to an apparatus and method for sealing zipper tape to a web of flexible film in an airtight manner.

Background of the Invention

BACKGROUND OF THE INVENTION

The popularity of reclosable zipper fasteners has created a demand for a large number and wide variety of reclosable bag sizes and types. It is commonly known in the art to form a reclosable bag 10 through the addition of a zipper strip 420 to a pair of bag walls 22, 24 in order to form the bag 10 with a reclosable, airtight seal, as shown in Figure 7. Transverse application of such zipper strips 420 to a web of flexible film (such as a web of plastic material) is also known in the art.

In many reclosable bag applications, an airtight seal is necessary in order to maintain the freshness and integrity of items stored within the bag 10. However, presently available reclosable bags do not provide or maintain an airtight seal as a result of due to air leakage through the ends of the zipper strips, leakage through the seal between the strip and the web, or leakage through the interlocked fastener profiles of the zipper strips themselves. There is thus a need for an apparatus and method for sealing a zipper strip to a web that reduces or eliminates the foregoing aforementioned leaks. There is also a need for an apparatus and method for repeatedly and quickly sealing zipper tape to a web to allow for high-speed production of a web with pre-installed zipper-tape to make the production of reclosable bags commercially viable.

Commonly known methods of construction and seal formation often cause inaccurate, commercially unacceptable seals that cannot be produced on an economically practical scale. Commonly known zipper strip formation methods require multiple sealing devices, precise machinery or extensive retooling to alter the size and type of reclosable fastener. Examples of such devices and methods are described in United States Patent Nos. 5,601,368 (Bodolay), 3,847,711